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REMARKS

This communication is intended as a full and complete response to the Final Office Action issued November 15, 2006. In view of the following discussion, the Applicants submit that none of the claims now pending in the application are obvious under the provisions of 35 U.S.C. § 103. Thus, the Applicants believe that all of these claims are in allowable form.

In addition, the Applicants' representative would like to thank Examiner Divecha for kindly taking a substantial amount of time on February 9, 2007 to discuss the merits of the subject invention. The Applicants' representative is aware of the time constraint that is placed on the Examiner and is appreciative of the Examiner's willingness to devote such large quantity of time to discuss the case on the merits.

I. REJECTION OF CLAIMS 1-6, 9-20 AND 34 UNDER 35 U.S.C. §103

A. Claims 1-4, 6, 9-20 and 34

Claims 1-4, 6, 9-20 and 34 stand rejected as being made obvious by the Lathrop patent (United States Patent No. 5,701,427, issued December 23, 1997, hereinafter "Lathrop") in view of the Barker et al. patent (United States Patent No. 5,931,916, issued August 3, 1999, hereinafter "Barker") and further in view of the Ma et al. patent (United States Patent No. 5,920,725, issued July 6, 1999, hereinafter "Ma"). In response, the Applicants have amended independent claims 1, 9, 14 and 18, from which claims 3-4, 6, 10, 12-13, 16-17 and 19-20 depend, as well as independent claim 34, in order to more clearly recite aspects of the present invention. Claims 2, 11 and 15 have been cancelled without prejudice.

In particular, the Examiner's attention is respectfully directed to the fact that none of Lathrop, Barker and Ma teaches, shows or suggests the novel invention of re-attempting to send, by a server in a client/server object-based computing system, a packet of data including data that represents an object (including data and functionality) in the system to a client in the system, where a time differential between re-attempts is determined using statistical information including at least one measurement of an amount of time elapsed for another packet of data to be sent and received, as claimed by the Applicants.

The Examiner alleges in the Final Office Action that this limitation is taught by Lathrop (*See*, Final Office Action, Page 9 : "Lathrop discloses the process wherein a time differential between each attempt at repeating [the sending of data and determining that the data has been received] is determined using statistical information including at least one measurement of an amount of time elapsed for another packet of data to be sent and received"). The Applicants respectfully submit, however, that the Examiner is reading beyond the scope of Lathrop's teachings.

First, the cited portions of Lathrop do not disclose a time period that governs when a source of data may re-attempt transmission of a data packet, but rather discloses a time period that governs when an intended recipient of the data may request transmission or retransmission of a data packet. Thus, attempts at retransmission of a packet are regulated not by the source, but by the intended recipient (*See, e.g.*, Lathrop at column 7, lines 22-28: "...if one or more information display modules [recipients] fail to receive an information update message, they [the recipient] may transmit retransmission request messages to request retransmission of the update information by the information source module [source]").

Second, although the cited portions of Lathrop do disclose an output timer that defines how long the intended recipient of data will wait before retransmitting a message to the source of the data, Lathrop does not disclose how that time period is calculated, much less that the time period is computed using statistical information including at least one measurement of an amount of time elapsed for another packet of data to be sent and received. Lathrop also discloses a backoff value that determines how long an intended recipient of data will wait, after determining that it has missed an update message from the source of the data, before sending a retransmission request to the source. Again, however, Lathrop fails to disclose specifically how this backoff value is calculated.

The Examiner indicated in the discussion of February 9 that even if Lathrop does not explicitly teach calculating a time differential between attempts by a data source to re-send a data packet, where the calculation uses statistical information including at least one measurement of an amount of time elapsed for another packet of data to be sent and received, that accounting for this elapsed time would be inherent in the calculation of such a time differential. The Applicants respectfully disagree with this

conclusion, however, and request that the Examiner provide support for the allegation that the use of the elapsed time in the time differential calculation is inherent in Lathrop. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy,* 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

Notably, Applicants' claims positively recite the step of re-attempting to send, by a server in a client/server object-based computing system, a packet of data including data that represents an object (including data and functionality) in the system to a client in the system, where a time differential between re-attempts is determined using statistical information including at least one measurement of an amount of time elapsed for another packet of data to be sent and received. Specifically, Applicants' independent claims 1, 9, 14, 18 and 34 recite:

> 1. A method for transmitting a packet of data from a first computing system to a second computing system, the first computing system and the second computing system being included in a client/server object-based computing system, wherein the first computing system is a server and the second computing system is a client, the method comprising:
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> identifying the packet of data using the first computing system, wherein said second computing system is listening, wherein the packet of data includes data which represents an object in the client/server object-based computing system, the object being identified as an object for which the second computing system has an interest in receiving updates, the object including data and functionality;
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> attempting to send the packet of data from the first computing system to the second computing system;
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> determining when the packet of data is received by the second computing system;
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> sending an acknowledgment from the second computing system to the first computing system when it is determined that the packet of data is received by the second computing system, the acknowledgement being arranged to indicate that the packet of data is received by the second computing system; and
>
> re-attempting at least once to send the packet of data from the first computing system to the second computing system when it is determined that the packet of data is not received by the second computing system, wherein a time differential between each re-attempt is determined using statistical information including at least one measurement of an amount of time elapsed for another packet of data to be sent and received. (Emphasis added)

9. A method for transmitting a packet of data from a first computing system to a second computing system, the first computing system and the second computing system being included in a client/server object-based computing system, wherein the first computing system is a server and the second computing system is a client, the method comprising:

a) attempting to send the packet of data from the first computing system to the second computing system, wherein said second computing system is listening, wherein the packet of data includes data which represents an object in the client/server object-based computing system, the object being identified as an object for which the second computing system has an interest in receiving updates, the object including data and functionality;

b) determining when the packet of data is received by the second computing system;

c) identifying the packet of data as being successfully sent when it is determined that the packet of data is received by the second computing system; and

d) assuming that packet losses have occurred when it is determined that the packet of data is not received by the second computing system, wherein assuming that packet losses have occurred includes repeating a) and b) for up to a predetermined maximum number of times, wherein a time differential between each attempt at repeating a) and b) is determined using statistical information including at least one measurement of an amount of time elapsed for another packet of data to be sent and received. (Emphasis added)

14. A computer program product for transmitting a packet of data from a first computing system to a second computing system, the first computing system and the second computing system being included in a client/server object-based computing system, wherein the first computing system is a server and the second computing system is a client, the computer program product comprising:

computer code for identifying the packet of data using the first computing system, wherein said second computing system is listening, wherein the packet of data includes data which represents an object in the client/server object-based computing system, the object being identified as an object for which the second computing system has an interest in receiving updates, the object including data and functionality;

computer code for attempting to send the packet of data from the first computing system to the second computing system;

computer code for determining when the packet of data is received by the second computing system;

computer code for sending an acknowledgment from the second computing system to the first computing system when it is determined that the packet of data is received by the second computing system, the acknowledgement being arranged to indicate that the packet of data is received by the second computing system;

computer code for re-attempting at least once to send the packet of data from the first computing system to the second computing system when it is determined that the packet of data is not received by the second computing system, wherein a time differential between each re-attempt is determined using statistical information including at least one measurement of an amount of time elapsed for another packet of data to be sent and received; and

a computer readable medium that stores the computer codes. (Emphasis added)

18. A computer program product for transmitting a packet of data from a first computing system to a second computing system, the first computing system and the second computing system being included in a client/server object-based computing system, wherein the first computing system is a server and the second computing system is a client, the computer program product comprising:

computer code for attempting to send the packet of data from the first computing system to the second computing system, wherein said second computing system is listening, wherein the packet of data includes data which represents an object in the client/server object-based computing system, the object being identified as an object for which the second computing system has an interest in receiving updates, the object including data and functionality;

computer code for determining when the packet of data is received by the second computing system;

computer code for identifying the packet of data as being successfully sent when it is determined that the packet of data is received by the second computing system;

computer code for assuming that packet losses have occurred when it is determined that the packet of data is not received by the second computing system, wherein assuming that packet losses have occurred includes computer code for re-attempting to send the packet of data from the first computing system to the second computing system and computer code for determining when the re-attempt to send the packet of data is successful for up to a predetermined maximum number of times, wherein a time differential between each re-attempt is determined using statistical information including at least one measurement of an amount of time elapsed for another packet of data to be sent and received; and

a computer readable medium that stores the computer codes. (Emphasis added)

34. A method for transmitting a packet of data from a first computing system to a second computing system, the first computing system and the second computing system being included in a client/server object-based computing system, wherein the first computing system is a server and the second computing system is a client, the method comprising:

identifying the packet of data using the first computing system, wherein said second computing system is listening, wherein the packet of data includes data which represents an object in the client/server object-based computing

system, the object being represented in an object list in the first computing system, the object list arranged to include objects that are to be updated, and the object also being represented in a filter tree which is arranged to identify objects that the second computing system has an interest in, the object including data and functionality;

attempting to send the packet of data from the first computing system to the second computing system;

determining when the packet of data is received by the second computing system; and

sending an acknowledgment from the second computing system to the first computing system when it is determined that the packet of data is received by the second computing system, the acknowledgement being arranged to indicate that the packet of data is received by the second computing system; and

re-attempting at least once to send the packet of data from the first computing system to the second computing system when it is determined that the packet of data is not received by the second computing system, wherein a time differential between each re-attempt is determined using statistical information including at least one measurement of an amount of time elapsed for another packet of data to be sent and received. (Emphasis added)

As discussed above, Lathrop, Barker and Ma, singly and in any permissible combination, fail to teach or suggest re-attempting to send, by a server in a client/server object-based computing system, a packet of data including data that represents an object (including data and functionality) in the system to a client in the system, where a time differential between re-attempts is determined using statistical information including at least one measurement of an amount of time elapsed for another packet of data to be sent and received, as claimed by the Applicants. Therefore, the Applicants respectfully submit that independent claims 1, 9, 14, 18 and 34 fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

Dependent claims 3-4, 6, 10, 12-13, 16-17 and 19-20 depend, either directly or indirectly, from claims 1, 9, 14 and 18 and recite additional features. As such, and for at least the same reasons set forth above, the Applicants submit that claims 3-4, 6, 10, 12-13, 16-17 and 19-20 are also not made obvious by the teachings of Lathrop in view of Barker and further in view of Ma. Therefore, the Applicants submit that dependent claims 3-4, 6, 10, 12-13, 16-17 and 19-20 also fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Accordingly, the Applicants respectfully request that the rejection of claims 1-4, 6, 9-20 and 34 under 35 U.S.C. § 103 be withdrawn.

B. Claim 5

Claim 5 stands rejected as being made obvious by Lathrop in view of Barker and Ma and further in view of the Whalen et al. patent (United States Patent No. 5,948,066, issued September 7, 1999, hereinafter "Whalen"). The Applicants respectfully traverse the rejection.

In particular, the Examiner's attention is respectfully directed to the fact that Whalen, like Lathrop, Barker and Ma, fails to teach, show or suggest the novel invention of re-attempting to send, by a server in a client/server object-based computing system, a packet of data including data that represents an object (including data and functionality) in the system to a client in the system, where a time differential between re-attempts is determined using statistical information including at least one measurement of an amount of time elapsed for another packet of data to be sent and received, as claimed by the Applicants. Therefore, Whalen does not bridge the gap in the teachings of Lathrop, Barker and Ma with respect to claim 1. Accordingly claim 1 is not made obvious by the teachings of Lathrop in view of Barker and Ma and further in view of Whalen.

Claim 5 depends directly from claim 1 and recites additional features therefor. As such, and for at least the same reasons set forth above, the Applicants submit that claim 5 is also not made obvious by the teachings of Lathrop in view of Barker and Ma and further in view of Whalen. Therefore, the Applicants submit that dependent claim 5 also fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Accordingly, the Applicants respectfully request that the rejection of claim 5 under 35 U.S.C. § 103 be withdrawn.

II. CONCLUSION

Thus, the Applicants submit that all of the presented claims fully satisfy the requirements of 35 U.S.C. §103. Consequently, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the maintenance of the final action in any of the claims now pending in the application, it

is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

3/13/07

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